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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,635	07/26/2000	Kevin R. Boyle	PHB 34,367	9407
65913	7590	06/01/2007	EXAMINER	
NXP, B.V.			RAMPURIA, SHARAD K	
NXP INTELLECTUAL PROPERTY DEPARTMENT				
M/S41-SJ			ART UNIT	PAPER NUMBER
1109 MCKAY DRIVE			2617	
SAN JOSE, CA 95131			MAIL DATE	DELIVERY MODE
			06/01/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/616,635

Applicant(s)

BOYLE, KEVIN R.

Examiner

Sharad Rampuria

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 5-12 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12 and 14-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

I. The Art Unit location of this application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

#### ***Continued Examination Under 37 CFR 1.114***

II. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/21/2007 has been entered.

#### ***Disposition of the claims***

III. The current office-action is in response to the Amendment Submitted/Entered with Filing of CPA/RCE filed on 03/21/2007.

Accordingly, Claims 4 and 13 are cancelled and Claims 1-3, 5-12 and 14-18 are pending for further examination as follows:

#### ***Claim Rejections - 35 USC § 103***

IV. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the

Art Unit: 2617

subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5, 7, 9-10, 14, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan (US 5467324) in view of Sonoda et al. (US 5768217).

Regarding Claim 1, Houlihan disclosed a body-worn personal communications apparatus (Abstract, 100; Fig.1; Col.3; 1-12), comprising:

A transceiver connected to said physically-shortened electric antenna (Col.3; 41-51 and Claim 1);

A microphone (132; Fig.1) connected to said transceiver; (Col.3; 31-40) and

A casing, wherein said transceiver is disposed within said casing, (Abstract, 100; Fig.1; Col.2; 51-67, Col.3; 1-12)

Wherein microphone (332; fig.9) is mounted on said physically-shortened electric antenna (Col.1; 67–Col.2; 5 and Col.5; 28-32)

Houlihan fails to disclose a physically-shortened electric antenna that is physically shorter than its electrical length; Wherein said physically-shortened electric antenna is designed so as to not require manipulation by a user and wherein said physically-shortened electric antenna is designed so as to not require manipulation by a user. However, Sonoda teaches in an analogous art, that a physically-shortened electric antenna that is physically shorter than its electrical length (electrical length is greater than its physical length; 20; Fig.1, Col.3; 49-60).

Wherein said physically-shortened electric antenna and said microphone are mounted transversely to a plane through said casing. (20; Fig.1, Col.3; 43-48)

Art Unit: 2617

Wherein said physically-shortened electric antenna is designed so as to not require manipulation by a user. (20; Fig.1, e.g. ***printed circuit antenna is located inside the housing which is inaccessible to user***; Col.3; 49-60) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Houlihan including a physically-shortened electric antenna that is physically shorter than its electrical length; Wherein said physically-shortened electric antenna is designed so as to not require manipulation by a user and wherein said physically-shortened electric antenna is inaccessible to user in order to provide an antenna whose satisfactory length is ensured to thereby decrease the thickness and size of an electronic device which contains such antenna, and a method of making such antenna and an electronic device or timepiece which has a reduced thickness and size by disposing such antenna within the device or timepiece case. (Col.1; 39-47)

Regarding Claim 5, Houlihan disclosed the apparatus of claim 1, wherein said microphone is located at an end of said physically-shortened electric antenna furthest from said casing. (332; fig.9; Col.5; 28-32)

Regarding Claim 7, Houlihan (5,467,324) disclosed The apparatus of claim 5, wherein said physically-shortened electric antenna is formed from a hollow wire, wherein a first electrical connection between said microphone and said transceiver is provided by said hollow wire, and wherein a second electrical connection between said microphone and said transceiver is provided by a conductor enclosed by said hollow wire. (Col.3; 41-51)

Art Unit: 2617

Regarding Claim 9, Houlihan disclosed the apparatus of claim 5, wherein said microphone provides a top loading to said physically-shortened electric antenna. (332; fig.9; Col.5; 28-32)

Regarding Claim 10, Houlihan disclosed a body-worn personal communications apparatus (Abstract, 100; Fig.1; Col.3; 1-12), comprising:

A casing; (Abstract, 100; Fig.1; Col.2; 51-67, Col.3; 1-12) and

Houlihan fails to disclose a physically-shortened electric antenna and said microphone are mounted transversely to a plane through said casing wherein the physically-shortened electric antenna that is physically shorter than its electrical length and wherein said physically-shortened electric antenna is designed so as to not require manipulation by a user. However, Sonoda teaches in an analogous art, that a physically-shortened electric antenna and said microphone are mounted transversely to a plane through said casing. (20; Fig.1, Col.3; 43-48) that is physically shorter than its electrical length (electrical length is greater than its physical length; 20; Fig.1, Col.3; 49-60). Wherein said physically-shortened electric antenna is designed so as to not require manipulation by a user. (20; Fig.1, e.g. *printed circuit antenna is located inside the housing which is inaccessible to user*; Col.3; 49-60)

Regarding Claim 14, Houlihan disclosed the apparatus of claim 10, wherein said microphone is located at an end of said physically-shortened electric antenna furthest from said casing. (332; fig.9; Col.5; 28-32)

Art Unit: 2617

Regarding Claim 17, Houlihan (5,467,324) disclosed The apparatus of claim 10, wherein said physically-shortened electric antenna is formed from a hollow wire, wherein a first electrical connection between said microphone and said transceiver is provided by said hollow wire, and wherein a second electrical connection between said microphone and said transceiver is provided by a conductor enclosed by said hollow wire. (Col.3; 41-51)

Regarding Claim 18, Houlihan disclosed the apparatus of claim 10, wherein said microphone provides a top loading to said physically-shortened electric antenna. (332; fig.9; Col.5; 28-32)

Claims 3, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan and Sonoda further in view of Hirai et al. (US 6429829).

Regarding Claim 3, the above combination disclosed all the particulars of the claim except a meander-line antenna. However, Hirai teaches in an analogous art, that the apparatus of claim 1, wherein said physically shortened electric antenna is a meander-line antenna. (16; Fig.1; Col.3; 11-17). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Houlihan and Sonoda including a meander-line antenna in order to minimize the space required for the antenna.

Regarding Claim 12, the above combination disclosed all the particulars of the claim except a meander-line antenna. However, Hirai teaches in an analogous art, that the apparatus of

Art Unit: 2617

claim 10, wherein said physically shortened electric antenna is a meander-line antenna. (16; Fig.1; Col.3; 11-17).

Claims 2, 6, 8, 11, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Houlihan and Sonoda further in view of McLean (GB 2036447).

Regarding Claim 2, Houlihan disclosed a body-worn personal communications apparatus (Abstract, 100; Fig.1; Col.3; 1-12), comprising:

A casing; (Abstract, 100; Fig.1; Col.2; 51-67, Col.3; 1-12) and

Houlihan fails to disclose a physically-shortened electric antenna and said microphone are mounted transversely to a plane through said casing wherein the physically-shortened electric antenna that is physically shorter than its electrical length and wherein said physically-shortened electric antenna is designed so as to not require manipulation by a user. However, Sonoda teaches in an analogous art, that a physically-shortened electric antenna and said microphone are mounted transversely to a plane through said casing. (20; Fig.1, Col.3; 43-48) that is physically shorter than its electrical length (electrical length is greater than its physical length; 20; Fig.1, Col.3; 49-60). Wherein said physically-shortened electric antenna is designed so as to not require manipulation by a user. (20; Fig.1, e.g. ***printed circuit antenna is located inside the housing which is inaccessible to user***; Col.3; 49-60)

The above combination disclosed all the particulars of the claim except wherein said physically shortened electric antenna is a helical antenna. However, McLean teaches in an analogous art, that the apparatus of claim 1, wherein said physically shortened electric antenna is



Art Unit: 2617

a helical antenna. (Page.2; 1-6) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Houlihan and Sonoda including wherein said physically shortened electric antenna is a helical antenna in order to use the thickness of cable.

Regarding Claim 6, the above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 5, wherein said physically shortened electric antenna is formed from a coaxial cable that provides electrical connections between said microphone and said transceiver. (Page.2; 45-59)

Regarding Claim 8, the above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 6, wherein said microphone provides a low impedance at radio frequencies to thereby enable said coaxial cable forming said physically-shortened electric antenna to act as an inductive stub. (Page.2; 45-64)

Regarding Claim 11, the above combination disclosed all the particulars of the claim except wherein said physically shortened electric antenna is a helical antenna. However, McLean teaches in an analogous art, that apparatus of claim 10, wherein said physically shortened electric antenna is a helical antenna. (Page.2; 1-6)

Regarding Claim 15, the above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of

Art Unit: 2617

claim 10, further comprising: a transceiver, wherein said physically-shortened electric antenna is formed from a coaxial cable that provides electrical connections between said microphone and said transceiver. (Page.2; 45-59)

Regarding Claim 16, the above combination disclosed all the particulars of the claim except the coaxial cable. However, McLean teaches in an analogous art, that The apparatus of claim 15, wherein said microphone provides a low impedance at radio frequencies to thereby enable said coaxial cable forming said physically-shortened electric antenna to act as an inductive stub. (Page.2; 45-59).

### ***Response to Amendments & Arguments***

V. Applicant's arguments with respect to claims 1-3, 5-12 and 14-18 have been fully considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

VI. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is (571) 272-7870. The examiner can normally be reached on M-F. (8:30-5 EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or [EBC@uspto.gov](mailto:EBC@uspto.gov).

/Sharad Rampuria/  
Patent Examiner  
Art Unit 2617